We claim:

1. An optical disc player for playing an optical disc with a first side and a second side, wherein data is arranged on the data layer of said first side along a first spiral oriented in a first direction when viewed on said first side, and data is arranged on the data layer of said second side along a second spiral oriented in a direction opposite that of said first spiral when viewed on said second side; said player comprising:

a controller determining a direction of rotation for the disc that allows data to be read from either side of the disc, said controller generating corresponding controller commands;

a motor responsive to said controller commands to rotate the disc in said direction of rotation; and

a read head disposed adjacent to said first side for reading data.

2. The player of claim 1 further comprising a sensor monitoring the direction in which data is recorded on the disc, said sensor generating sensor signals used by said controller to generate said controller commands.

3. The player of claim 1 wherein the disc includes a special portion in a predetermined location that is used to store data indicative of the characteristics of the disc, and wherein in response to the initial presence of the disc in the player, said controller sends a read command to said read head to read data from the special annular portion.

4. The player of claim 1 wherein said disc includes a main portion with program data arranged along said first spiral to allow data to be read from said main portion when said disc is rotated in said direction of rotation, and a special portion with disc characteristic data arranged to be read when the disc is rotated in an opposite direction, and wherein said controller sends a read command to said read head to read data in said special portion.

5. The player of claim 4 wherein said controller generates said read command only when no data is detected in the main portion.

6. The player of claim 1 further comprising a display showing information about the operation of the player and/or disc characteristics.

7. The player of claim 1 further comprising a manual switch operable by a user for controlling the direction in which said motor rotates the disc, said controller being coupled to said switch to generate said controller commands.

8. The player of claim 1 further comprising a yoke that selectively switches said read head between said sides.

9. The player of claim 1 comprising a first and a second read head, each read head being positioned on a respective side of the disc.

10. An optical disc player for reading a disc having a first side and a second side, each side carrying data arranged to be read only when the disc is rotating in a first direction and the disc has a first orientation or when the disc is rotating in a second direction and the disc has a second orientation, the player comprising:

a controller that issues controller commands defining a direction of rotation dependent on the orientation of the disc as the disc is inserted into the player;

at least a first read head to read data from the first side of the disc; and

a motor capable of rotating the disc in said first direction or second direction in response to said controller commands.

11. The player of claim 10 wherein when the disc is initially inserted, said motor rotates the disc in a default direction of rotation, and said controller senses when data is read from the disc by said first read head and issues control commands to reverse the direction of rotation of the disc if no data is read.

12. The player of claim 10 wherein when the disc is initially inserted, the first read head is directed at a predetermined portion on the disc to read disc characteristic data.

13. The player of claim 10 further comprising a user-operated member having a first and a second position for selecting said first and second directions, respectively, wherein said controller is coupled to said user-operated member and issues said controller commands in accordance with the position of said user-operated

member.

14. The player of claim 10 further comprising a second head, said first and second heads being assigned respectively to read the first and the second sides of the optical disc, and wherein the side assignments of said first and second heads are reversed to read the second and first sides respectively in response to the controller commands.

15. The player of claim 11 further comprising a sensor that determines the direction in which data is arranged on the disc, said controller being coupled to said sensor to issue said commands.

16. A player for reading an optical DVD disc having first and second sides comprising:

a controller generating controller commands;

a motor responsive to the controller commands; and

two read heads reading data from respective sides of the disc;

wherein said controller causes said motor to rotate said disc in one direction to read data on said first side and to rotate said disc in the opposite direction to read data on the second side.

17. The player of claim 16 further comprising a user-operated member having a first and a second position and wherein said controller is coupled to said user-

operated member to determine the direction of rotation of the disc.

18. The player of claim 16 further comprising a sensor adapted to detect the direction in which data is arranged on one of said sides, said sensor generating a signal to said controller.

19. An optical disc player for reading a disc having first and second sides, each side carrying data arranged to be read only when the disc is rotating in a first direction and has a first orientation or the disc is rotating in a second direction and has a second orientation, the player comprising:

a controller that issues controller commands;

at least a first read head to read data from said first side of the disc;

a display responsive to controller commands to display a message requesting that the disc be reversed;

wherein said controller generates said controller commands if no data is read from the disc.

20. A method of operating an optical disc player comprising:

inserting an optical disc into the disc player, said disc having at least one side with a data layer with data;

rotating the disc in a predetermined direction;

determining if the data is readable; and

reversing the rotation of the disc if the data is not readable.

21. The method of claim 20 wherein said rotation is reversed if data cannot be read from the disc during the attempt.

22. The method of claim 20 wherein said data layer includes program data and a special portion with disc characteristic data, wherein said step of determining includes attempting to read said special portion.

23. The method of claim 22 wherein said program data and said disc characteristic data are arranged on said data layer so that they can be read when the disc is rotated in an appropriate direction.

24. The method of claim 22 wherein said program data is arranged so that it can be read only when the disc is rotated in a first direction and said disc characteristic data is arranged so that it can be read only when the disc is rotated in a second direction opposite to said first direction.

25. The method of claim 20 wherein said data layer includes a first portion having first data arranged for reading when the disc is rotated in a first direction and a second portion with second data arranged for reading when the disc is rotated in a second direction opposite said first direction, and wherein first an attempt is made to read said first data, and if this first data cannot be read, then the rotation is reversed and an attempt is made to read said second data.

26. The method of claim 20 wherein said data layer includes said special data that is readable when the disc is rotated either in a first or a second direction, said data being indicative of the proper direction rotation required for data on the disc to be read, wherein said step of determining includes reading said special data.

27. A method of operating a disc player to play a disc having a first and a second side, each said side having data arranged along a respective first and second spiral, said spirals being mirror images of each other when viewed from the respective sides, so that the disc can be read when it is rotated in a first direction and has a first orientation, or when it is rotated in a second direction and has a second orientation, comprising:

inserting the disc into the player;

determining the orientation of the disc; and

rotating the disc in the direction required to play both sides of the disc based on the orientation of the disc.

28. The method of claim 27 wherein said step of determining includes determining the orientation of the disc.

29. The method of claim 28 wherein the step of determining includes rotating the disc in a predetermined direction and attempting to read data from said first side.

30. The method of claim 29 further comprising reversing said rotation if data is not read from said first side.

31. The method of claim 27 wherein said disc has a special section on the first side, and wherein said step of detecting includes detecting said special section.

32. The method of claim 27 wherein said disc has on said first side a first special section with data oriented along said first spiral and a second special section with data oriented along a third spiral oriented in a direction opposite that of said first spiral, and wherein said step of detecting includes rotating the disc for reading the data on the first special section, attempting to read the data on the first special section, and if no data is found on the first special section, reversing the rotation of the disc and attempting to read the data on the second special section.

33. The method of claim 27 wherein said disc includes a special section on one side with data indicative of the required direction of the rotation for the disc for data to be read from either side, said data being readable independently of the direction of rotation of the disc and wherein said step of detecting the first side includes reading the data on said special section.

34. An optical disc player for reading an optical disc having a first side and a second side, each side including at least a first data layer, wherein data is arranged on

the data layer of said first side along a first spiral oriented in a first direction when viewed on said first side, and data is arranged on the data layer of said second side along a second spiral oriented in a direction opposite that of said first spiral when viewed on said second side; and direction indicia disposed on at least one of said first and second sides, said direction indicia being machine readable and being indicative of the direction in which the disc must be rotated to allow data to be read from at least one side, said optical disc player comprising:

a motor rotating said disc selectively in one of a first and second directions; and

a read head that can read data from one side when said read head is adjacent to said one side and the disc is rotated by the motor in one direction and can read data from the other side when read head is adjacent to said other side and the disc is rotated in the other direction.

35. An optical disc player for reading an optical disc having a first side and a second side, each side including at least a first data layer, wherein data is arranged on the data layer of said first side along a first spiral oriented in a first direction when viewed on said first side, and data is arranged on the data layer of said second side along a second spiral oriented in a direction opposite that of said first spiral when viewed on said second side, said optical disc player comprising:

a motor rotating said disc selectively in one of a first and second directions;

a read head that can read data from one side when said read head is

adjacent to said one side and the disc is rotated by the motor in one direction and can read data from the other side when read head is adjacent to said other side and the disc is rotated in the other direction; and

a tracking monitor that tracks the tracking error associated with said read head;

wherein said motor reverses the direction of rotation of the disc if the tracking error from the tracking monitor is excessive.